

Guidance for Evaluation of Local Emergency Response Capabilities

The following guidance has been established by New York State Division of Homeland Security and Emergency Services, Office of Fire Prevention and Control (OFPC), for the benefit of permit applicants and the independent qualified persons conducting the review required under New York State Department of Environmental Conservation 6 NYCRR 570 Regulation of Liquefied Natural Gas (LNG) Facilities. This guidance specifically addresses these two highlighted sections:

§ 570.2.(b)(10) *a report, prepared by an independent qualified person, that evaluates the capability and preparedness, or lack thereof, of fire departments in the vicinity of the proposed facility who would respond to a release of LNG or fire involving LNG. If this report concludes that any additional training, personnel, or equipment would be needed for local fire departments to effectively respond to a release or fire involving LNG, the report shall detail the deficiencies and provide a detailed cost estimate and schedule for remedying any deficiencies;*

and

§ 570.3(d) *Each applicant for a permit shall offer an emergency response training program (and, as may be required under 570.2(d)(3), necessary personnel and/or equipment) for local enforcement, fire, and hazardous material response personnel of the authority having jurisdiction. The applicant shall offer, at applicant's cost, relevant training (and, as may be required under 570.2(d)(3), necessary personnel and/or equipment) prior to commencing operation of the LNG facility and annually thereafter using an appropriate training program approved by the New York State Fire Administrator within the New York State Division of Homeland Security and Emergency Services."*

The "Independent Qualified Person" shall be a properly licensed Fire Protection Engineer.

FIRE DEPARTMENT CAPABILITIES AND PREPAREDNESS EVALUATION CRITERIA:

The evaluation of local fire department capabilities and preparedness must include, but is not limited to, staffing/training, equipment and standard operating procedures. It must also take into consideration the size and complexity of the LNG facility. Each area is further defined below and shall be addressed in the fire department evaluation report.

Staffing/Training:

The responsibility to provide the properly trained personnel for a response to any incident belongs to the Authority Having Jurisdiction.

29 CFR 1910.120(q) identifies the emergency response program to hazardous substance releases. This regulation identifies critical staffing positions and provides training requirements, levels of responders and specific roles/tasks that may be required during a LNG emergency response including but not limited to:

- Incident Command
- Safety Officer
- Evacuation
- Emergency Medical Care
- Air Monitoring
- Containment
- Remediation

29 CFR 1910.120(q) states operations in hazardous areas shall be performed using the buddy system in groups of two or more with back-up personnel standing by with equipment ready to provide assistance.

29 CFR 1910.134(g)(4) has been adapted by the fire service for most, if not all, of their operations as the “two in/two out rule,” requiring at least two personnel to affect a task and at least two equally trained personnel to back up the first team.

As outlined in NFPA 1500 (2013), members of the fire department should receive documented education and training. The members should remain proficient as verified by an annual skills check. The report must provide information on the training received and verify that an annual skills check is included in their training plans. By means of normal response or by automatic/mutual aid, the fire department shall be evaluated for their training specific to complete the following tasks:

- LNG Fire Suppression Techniques
- Air Monitoring
- LNG spill response
- LNG Extinguishing Agents
- Emergency Medical Care
- Hazardous Materials Response

An evaluation of the proposed facility (see paragraph 12.2.1 of NFPA 52 and paragraph 12.2. of NFPA 59A as applicable) may identify potential safety hazards that require additional capabilities including, among others, the ability to perform technical rescues. Utilizing NFPA 1670(2014) as a guidance document relating to technical rescue needs, the report should identify the capability of the fire department/mutual aid to affect any potential technical rescues identified. The report should detail deficiencies and provide a detailed cost estimate and schedule for remedying any deficiencies.

As outlined in NFPA 472 and 29 CFR 1910.120(q), specific competencies and requirements have been described for Hazardous Materials Responders. The report shall establish that the fire department will respond to LNG incidents at the First Responder Operations Level at a minimum, and at a higher level if identified as necessary to accomplish the tasks identified above and any tasks specific to the proposed facility.

The report must account for the availability of staffing trained to fulfil the roles/tasks, with the required back-up, on a 24/7/365 basis. The report must account for staffing levels that may vary throughout the day/week in a career, combination, or volunteer fire department. Automatic/mutual aid staffing resources may be accounted for within the evaluation and a separate evaluation may be necessary of those agencies.

Equipment:

Equipment appropriate for LNG incidents includes, but is not limited to: dry chemical extinguishers or equipment, high expansion foam and air monitoring equipment (meters). As outlined in NFPA 1901 (2009), only one approved dry chemical portable fire extinguisher with a minimum 80-BC rating per apparatus is required, therefore additional dry chemical extinguishers or equipment may be necessary for response to an LNG incident. Apparatus mounted foam application systems may be present, but are not required. High Expansion foam systems are not common in most areas of New York State.

The report should identify current levels of apparatus, dry chemical fire extinguishers, metering equipment, medical equipment, foam capabilities, or other technical equipment required to respond to any incident at the permitted facility. The report should identify specific equipment needs required to identify, contain, and/or remediate a LNG incident.

Automatic/mutual aid may be accounted for within the evaluation and a separate evaluation may be necessary of those agencies.

29 CFR 1910.120(h) describes monitoring but does not establish a minimum number of meters required. The report must document whether a fire department has an adequate number of meters and appropriate training in the operation of meters capable of detecting methane and oxygen levels. The report must document that the fire department has adequate procedures for meter calibration and maintenance.

The agency or automatic/mutual aid should have equipment required to complete the tasks outlined in the training/capability section. The report should specify which equipment is available through the local fire department or through automatic/mutual aid. The report should identify any specialty assets held by the fire department pertinent to the proposed facility.

If the report concludes that any additional equipment would be needed for local fire departments to effectively respond to a release or fire involving LNG, the report shall detail the deficiencies and provide a detailed cost estimate and schedule for remedying any deficiencies

Standard Operating Procedures:

The evaluation report should include a copy of the current standard operating procedures (SOPs) for the fire department response to a LNG incident. A review the SOPs should be included in the report.

If the report concludes that the SOPs are not present, not sufficient, out of date, or not in accordance with all cited laws and standards, the report shall detail the deficiencies and provide detailed changes and schedule for remedying any deficiencies.

EMERGENCY RESPONSE TRAINING PROGRAM

OFPC recommends the following approach to ensuring appropriate training for agencies and/or mutual aid agencies that will cover a LNG facility. The report should identify which of these training steps have been completed and specify any training plans to accomplish the other training steps.

Awareness Level Training

An awareness level LNG training course shall be made available for any emergency responder in NYS. Training courses may be presented to OFPC for review and shall contain, at a minimum, these topics:

- LNG Properties
- Storage
- Transportation
- Liquefaction
- Regasification
- Bunkering
- High Expansion Foam
- Dry Chemical Extinguishers
- Storm & Sewer System Protection
- Industrial Facilities Hazards
- Rapid Phase Transition
- Extinguishment
- Medical Considerations
- LNG fueled vehicle technology

Once a permit application has been received by DEC, the members of a fire department should begin to train on LNG and the specific hazards it presents. An OFPC program will be created and will be an option available to the Applicant.

Practical Skills Training

The Applicant shall provide hands-on practical skills LNG training to a proportional representation of the command and operational staff of the local fire department and mutual aid agencies if those agencies will be providing staffing, capabilities or equipment accounted for in the evaluation. The final number of personnel required to be trained may vary depending upon several factors including, but not limited to:

- the Authority Having Jurisdiction
- size of the proposed facility
- number of staff in the local agency
- local agency's reliance upon mutual aid
- training capabilities of local agency
- facility fire suppression equipment

Current industry recognized training is available through:

- TEEX <http://www.teex.com/teex.cfm?pageid=ESTIprog&area=ESTI&templateid=1536>
- Massachusetts Fire Training Academy in conjunction with Northeast Gas Association <http://www.northeastgas.org/tqi-lng-safety.php>

The Applicant shall provide training on an annual basis and shall encompass either new personnel or a refresher to previously trained personnel. It is recommended that trained personnel should attend a refresher course every five years.

This list will be updated as additional training is recognized. Other sources of training may be presented to OFPC for review. Comprehensive course materials and hands-on extinguishment components are required in order for training to be considered.

Emergency Response Plan Integration

In accordance with Chapter 12 of both NFPA 52 and 59A, the Applicant shall plan for emergency response measures coordinated with the appropriate local emergency agencies. The applicant should also take the steps necessary to ensure all related response plans are coordinated with any existing local or county plans.

Site-Specific Training

On an annual basis, the Permittee and the Fire Department shall review or provide for, at a minimum:

- Site and Facility familiarization
- Emergency procedure familiarization
- Emergency shutdown procedures
- Changes to facility operations
- Integrated response drills
- After hour contacts and procedures
- Facility fire suppression equipment
- Changes to facility staffing levels

This guidance is designed to encompass all facility types. This guidance will be subject to change and update as standards and regulations are changed/updated.